

## The nomenclature question.

### Botanical nomenclature and non-systematists.

In the discussions on nomenclature, an important phase which receives scant consideration is the attitude of the non-systematists towards it. This is natural enough in this country since nearly all American botanists are systematists, a condition which is due of course to the influence of Dr. Gray. Although he left few or, as some would say, no pupils, he nevertheless, by his pre-eminence and authority at home and abroad, by his attractive personality, and by his splendid works, set systematic botany as the ideal to the students of this country. No teacher or investigator of any thing like equal prominence has arisen among us in any other department of botany, the morphology of cryptogams alone excepted, so that his influence in this particular has hardly yet been weakened.

But the day of systematic botany of the old fashioned based-upon-anatomy sort is passing away. It is exhausting its own field; the law of diminishing return applies to it; and most important of all, the science is outgrowing it. A few of our younger systematists are interested equally in biology; young men, influenced it is true from Europe, are arising among us ambitious to become biologists in the same true sense as zoologists are; and they will change the complexion of botanical work for the next generation.

Now what will be the attitude of the biologists, of the new systematists, of the interested public, in nomenclature? In other words, upon what principle will future users of plant names use them? Now for my own part from what I know of human nature, and from what I have seen and heard among those to whom what a living plant is and does is of more interest than what it resembles or what is said about it in books, I am convinced that the future users of plant names utterly regardless of systems will use them exactly on the same principle as they use other names, simply as conveniences. What then makes a name convenient? Undoubtedly its first quality is ready intelligibility, which depends upon its use by the most people, and as Dr. Robinson has

said, this is more important than stability or consistency. This is simply the law which governs the persistence of all other names. By what divine or other right is botanical different from other language? We must admit that in the long run, where there is no personal or philological reason for keeping to a special system, the principles controlling the use of other names will control the use of botanical names also. But all other names, those of things, places, people, battles, institutions, are, except to philologists, mere symbols or handles. Nobody except the philologists ever trouble to enquire whether they are appropriate, or historically correct or give due honor to their first users or fit a system of orthography or grammar. There are principles governing their giving and use, it is true, but these are never statutory, they are unwritten, unconscious, psychological. Nearly all attempts to legislate on names fail, as witness efforts at orthographical reform of English, of grammarians to control certain features of language, of rulers to replace native names of rivers, etc., by introduced ones. Regulations unaccompanied by a power to enforce them, always fail. In language, names however given, after they have once come into use, are upon the principle of least resistance, used still more because they are the most intelligible. Men use those most convenient at the moment without regard to reasons. Botanical names differ from others only in that they are given with more deliberation and some attempt at system; I am unable to see any principle in their use which will in the long run make them different from other names. I believe, therefore, that all efforts to reform nomenclature which involve changes of well known and well established names, will ultimately fail, for the very good reason that the make-up of men's minds is against the success of such changes.

Another feature of language which the reformers forget is the immense value of authority upon hero-worshiping mankind. It is in all language the use of words by great men which makes these words good form; considerations of consistency and stability are as nothing in comparison. This is very illogical and inconsiderate of humanity, but it is true. The personal nomenclature system of Dr. Gray is to most people made as authoritative by his very use of it, as is the use of English words by a recognized master of English. And why not? Who is better competent to judge of what consti-

tutes a good name? The only man who can attempt with any hope of success to reform Dr. Gray's nomenclature is one who is greater than he and can overcome the weight of his authority by a yet greater, and none such has yet attempted it. If the American botanists would but recognize this principle, and get over their soreness on the point of Dr. Gray's personal system, there would soon be sufficient stability in nomenclature.

In other affairs of life a reform to have hope of success must proceed by building upon whatever already exists that is fixed and good. A reformer who wishes to reform by upsetting everything, good and bad, and beginning all over again upon a plan of his own, is called an anarchist, and the sentiment of the community is against him. A system of reform of nomenclature which would abandon the most fixed names if they do not fit its rules, savors of this spirit. We are told, however, that the proposed system has been tried by other sciences and is a success. But I am inclined to suspect either that the blessed peace which we are assured broods over the camp of the ornithologists, ichthyologists, herpetologists, *et al.*, is not so perfect as it seems, or else that the conditions there are somewhat different from ours.

The solution of the difficulty seems to me to lie primarily in treating nomenclature on the known principles of persistence of language as far as these go, accepting what is fixed as final, endeavoring to settle doubtful cases by following the best usage, and by trying through congresses, etc., to frame uniform rules for the future. This would give us a system which, if not consistent or at first stable, would be convenient and certain to be successful.

The real trouble, I believe, lies in the virtual exhaustion of the field of North American botany. The plants have been nearly all described and well described, so there is nothing left to do except to describe them over again in new ways, or under new titles. If one will persist in threshing over and over old straw, and finds only an occasional kernel of grain as a reward, it is not unnatural that he should find amusement and even see importance in piling the heaps of straw in new and striking patterns. The subject seems to share with millstones and the human heart the necessity for grinding itself when it has nothing else to grind. Systematic botany is too conservative in its methods, especially among

us. It refuses to use new lines of research offered by embryology and comparative morphology, and except in the accumulation of more material and some refinement in details it is hardly less but rather more of a book and skeleton study than it was fifty years ago, or even to Linnaeus himself. The earnest worker in other fields, and indeed present popular opinion can hardly be blamed for considering a good deal of it, and especially wrangling over nomenclature, as of a very amateurish sort, employing the faculties of the postage stamp collector rather than those of the naturalist.

To sum up: I do not believe in and do not teach the nomenclature of the Madison Congress, because I do not believe it can possibly prevail. It violates the psychological principles of the use of language, it is not sanctioned by the leading authority of the systematic world, past nor present, and its advocates give us no guarantee that they can produce works on North American botany of greater authority than those already in existence; it is impossible to secure the cooperation of the foreign botanists; it overturns much that was sufficiently stable, to replace it by a new system which has not the element of stability, since it will not be able to induce future botanists to use it.—W. F. GANONG.

### Dr. Robinson and homonyms.

In the preceding number of the GAZETTE Dr. B. L. Robinson has presented another of his fatal objections to the principles of nomenclature adopted by the Botanical Club of the American Association—namely, the principle of the rejection of homonyms as applied to binominals. In support of this objection he cites not a case known to science, but a wholly suppositious one, the occurrence of which is a matter of almost ridiculous improbability. It should be answer enough that this is a purely hypothetical objection, especially if we are to be guided by Dr. Robinson's previous utterance<sup>1</sup> that principles of nomenclature should not be laid on theoretical grounds. There probably will never occur a more glaring case of unscientific "lumping" of genera than that indulged in by Dr. Otto Kuntze when he united *Bigelovia*, *Solidago*, and *Aplopappus* with *Aster*, and yet even this lamentable piece of patchwork has not produced the chaotic results por-

<sup>1</sup> Recommendations regarding the nomenclature of systematic botany, p. 1. (May, 1895).